KNN2/KNN (Q9L10)

Total Questions: 20

Most Correct Answers: **#9**

Least Correct Answers: **#16**

1. KNN is

6/8 (A) data-driven method

2/8 (B) model-driven method

0/8 (C) I do not know

2. The dependent variable of the classification is

6/8 (A) categorical

1/8 (B) numeric

1/8 (C) I do not know

3. KNN can be used for regression

7/8 (A) Yes

1/8 (B) No

0/8 (C) I do not know

4. In the case of KNN classification we use

3/8 (A) average of outcomes

5/8 (B) majority voting scheme

0/8 (C) I do not know

5. Which of these errors will increase constantly by increasing k?

5/8 (A) train error

1/8 (B) test error

2/8 (C) both

0/8 (D) I do not know

6. **This function can be used to perform KNN classificationin R**

4/8 (A) knn()

0/8 (B) k_nn()

2/8 (C) knnreg()

2/8 (D) knearneib()

0/8 (E) I do not know

7. **With the increase of k, the decision boundary will be**

1/8 (A) simplified

5/8 (B) more complex

1/8 (C) I do not know

1/8 (D) unchanged

8. **KNN algorithm is sensitive to outliers**

6/8 (A) True

2/8 (B) False

0/8 (C) I do not know

9. **KNN**

7/8 (A) is a supervised learning algorithm.

1/8 (B) is an unsupervised learning algorithm.

0/8 (C) I do not know

10. **In the case of small k we have**

3/8 (A) overfitting

3/8 (B) underfitting

2/8 (C) it depends on the situation

0/8 (D) I do not know

11. Why do we need scaling in KNN?

1/8   (A)   to avoid overfitting

1/8   (B)   to avoid underfitting

6/8   (C)   to have "equal" weights for variables

0/8   (D)   I do not know

12. Let k = n, (n- number of observations), K-NN is same as

0/8   (A)   random guessing

6/8   (B)   everything will be classified as the most probable class (in total)

1/8   (C)   everything will be classified as the least probable class (in total)

1/8   (D)   I do not know

13. This function can be used to perform K-NN regression in R

4/8   (A)   knn.reg

2/8   (B)   knnforreg

0/8   (C)   regknn

0/8   (D)   knnforregression

2/8   (E)   I do not know

14. Do you need to worry about scaling with one explanatory variable?

3/8   (A)   No

5/8   (B)   Yes

0/8   (C)   I do not know

**15. n - the number of observation,
m - the number of explanatory variables**

When n=k, m=1, the decision boundary for regression is

4/8   (A)   a line

2/8   (B)   a stepwise constant function

0/8   (C)   a stepwise quadratic function

2/8   (D)   I do not know

16. **Which of these algorithms can be used to fill the missing values**

2/8 (A) KNN for regression

5/8 (B) KNN for classification

1/8 (C) both

0/8 (D) I do not know

17. **Which one is better: KNN regression or Linear regression ?**

3/8 (A) KNN outperform LR if the parametric form that has been selected is close to the true form of f

2/8 (B) LR outperform KNN if the parametric form that has been selected is close to the true form of f

2/8 (C) KNN will always outperform the LR

1/8 (D) I do not know

18. **Which one is the Disadvantage of KNN?**

0/8 (A) required assumptions

2/8 (B) cannot be applied for regression

2/8 (C) difficult to perform

4/8 (D) the problem of high dimensional data

0/8 (E) I do not know

19. **The best k for train set equals to**

2/8 (A) 1

4/8 (B) 2

1/8 (C) 0

1/8 (D) I do not know

20.   What is the Parzen window

Tigran, Karamyab

    idk

Hripsime

    Kernel density estimation

Elena

    I do not know ((

Anna

    Kernel